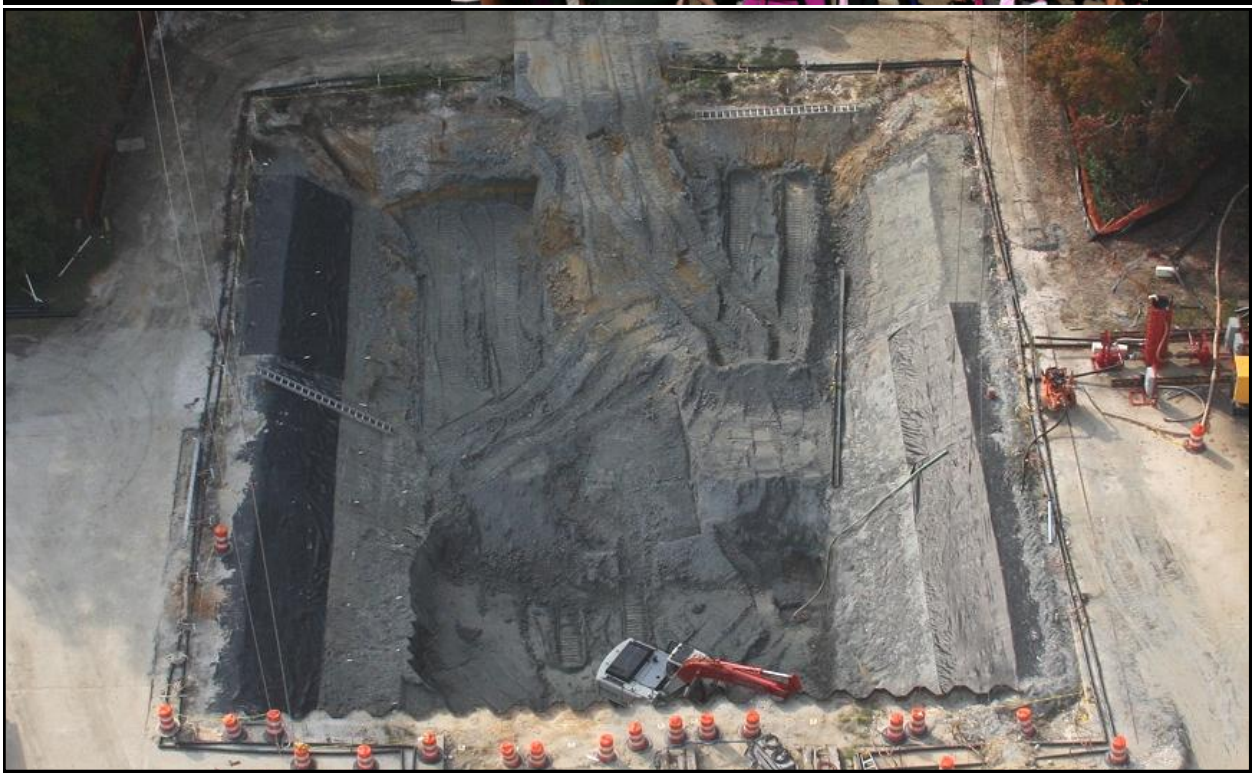
ORION
CREW EXPLORATION VEHICLE

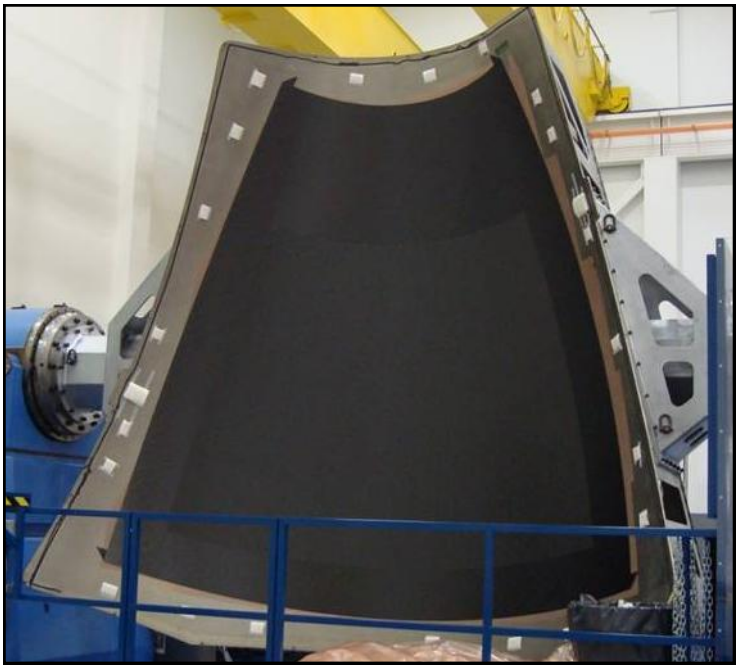
WEEKLY ACCOMPLISHMENTS

10.22.10



Progress continues with the phase two excavation of the Hydro Impact Basin (shown above) at the Langley Research Center in Virginia. The construction team has now reached the final depth of 20 feet in some areas of the basin. Once the excavation is complete, placement of the shotcrete and the concrete crane pad will be installed towards the end of November. Approximately 1.25 million gallons of city water will fill the basin starting in early December. The Hydro Impact Basin will be used to gather data on the effects of a water landing on the Crew Module.

The Crew Module (CM) Ground Test Article (GTA) team continues to install the TPS Attachment Structure (TAS) at the Michoud Assembly Facility in New Orleans, Louisiana. The drilling process (shown right) is very lengthy, with each hole needing to be drilled with several different size drill bits to meet the hole size requirement. The team is close to completing the drilling of over 850 holes into the GTA.



The first steps in fabricating the Launch Abort System (LAS) Ground Test Article (GTA) took place at the ATK facility in Iuka, Mississippi. The team began by fabricating the ogive fairing panels (shown left,) which make up the base of the Launch Abort System. The panels are made of a composite material that are created through a layup fabrication process where strands of carbon fibers are compressed together to form a single layer. After the layup process is completed, the panels will be cured and go through non-destructive evaluations before being shipped to the Michoud Assembly Facility (MAF) in New Orleans, Louisiana for final assembly.

Lockheed Martin's Pam Melroy, a former shuttle commander, and former NASA Flight Director Gene Kranz (both shown in center of picture on right with members of the video team and Lockheed Martin employees) participated in a public service video, which was taped in the Exploration Development Lab in Houston. The video, which stresses the importance of energy conservation, will be distributed across an eight-state region beginning with Colorado in early 2011.

Communications and Public Outreach

The Orion Launch Abort System (LAS) Pathfinder (shown left and in banner) recently made a stop at the Franklin Institute in Philadelphia, Pennsylvania reaching over 3500 visitors. The LAS Pathfinder is now preparing for a stop at EarthFest at Langley Research Center in Virginia. Next week, the outreach stops will conclude at the Kennedy Space Center Visitor Center in Florida.